昭和三十六年十一月十五日印刷　昭和三十六年十一月二十日発行（毎月二十日発行）
昭和二十六年四月十三日　第三種郵便物認可

第 36 巻　第 11 号　（通巻 第 406 号）　Vol. 36 No. 11

植物研究雑誌

THE JOURNAL OF JAPANESE BOTANY

昭和 36 年 11 月　November 1961

津村研究所

Tsumura Laboratory

TOKYO

NSP
RAM
MM
card

COMMONWEALTH MYCOLOGICAL INSTITUTE
23 FEB 1962

目　次

Contents

〔表紙カットの説明〕カボチャの師板を正面から見たところ（伊藤　洋）
〔Explanation of the cut on the cover〕A sieve plate of the stem of *Cucurbita moschata*. (H. Ito)

Masumi MASHIMA*: A few morphological considerations on etiolated seedlings

真 島 真 澄*: 黄化芽生の形態に関する二三の考察

The morphological features of the etiolated seedling of the dicotyledonous plants are the exaggerated elongation of the internode of the stem and the contraction of the leaf or the stunted growth of the leaf. The exaggerated elongation of the internode of the stem means the exaggerated elongation of the cells which make up the internode of the stem, the increasing division of the cells, or the combination of both. Here I wish to make clear the triple relations of these phenomena, that is the exaggerated elongation of the internode of the stem, the exaggerated growth of the cells and the division of the cells. On the other hand, the leaves of the etiolated seeding generally remain in their embryonic state of growth though we see differences in the degree of growth according to the nature of species. This led me to examine the state of growth in darkness, that of lamina, petiole and stipule, these three parts which make up a leaf, and I have noticed several patterns in the growth of the etiolated leaves.

The material used for experiment are the plants of Leguminosae. In the study of the internode 15 genera, 15 species, 25 varieties were used, while in case of leaves 17 genera, 17 species, 10 varities were the object of my research. I tried to germinate these seeds in a dark chamber, and proceeded to examine their etiolated seedlings in each case, if there were perfect special features of its own. I also tried to eamine the seedings in a normal condition, using by way of contrust the similar material in same days old with the one which had used as my experimental material.

On the exaggerated elongation of the internode

Mac Dougal (103) has made an anatomical study of the features of etiolation using as material the plants of more than 100 species including *Agave americana* with the result that exaggerated elongation of the internode is due both to the exaggerated elongation of cells and the increasing cell division. G. Kraus (1864) is also of the same opinion as the result of the experiments made upon the material of twelve species including *Nicotiana tabacum*. But Sachs (1892) with *Tropaeolum majus*

* Biological Institute, Faculty of Liberal Arts, Shiga University, Otsu City, Shiga Pref. 滋賀県大津市滋賀大学学芸学部生物学教室.

and other 5 species; Möbius (1895) with *Ceratophylum* sp. and other few water plants; Fukuda & others (1952) with *Hydrilla verticillata* have proved that the exaggerated elongation of the internode is caused only by the elongation of the cells and not by the cell division. But such a difference of opinion, it seems to me, is due to that of the experimental material. In my case I have taken up leguminous seedling as my experimental material, by which I have found out variety of modes in the way of combining elongation and division of cells in the experiment. I have given due consideration to the length of epidermal cells and proportion of cell division as compared to those normal seedling in each individual and in each internode.

For instance in case of the epidermis of hypocotyl the cell is 10.54 times longer than the normal, while the rate of cell division is 1.14 times greater, and the exaggerated elongation of hypocotyl is observed to have been on caused only by the elongation of cells. In case of two varieties of *Pisum sativum*, early giant and Alasca, the length of the cells of the second internode is 3.04, 4.45 longer than that of the normal one, while the ratio of the cell division is 3.60, 4.91 times longer than the normal one, and the elongation of cells and division have been on the increase resulting in the exaggerated elongation of the internode. In case of *Glycine soja* I have taken up three varieties. In this experiment I have observed the length of hypocotyl and that of the cells is respectively 6.42, 5.01, 4.68 times longer than that of the normal seedling while the ratio of the division of cells is each 0.64, 0.86, 0.81 times longer than the normal seedling. In this case, however, there was no development of the cells, as compared with that of normal seedling.

Even in the same material we observe the great difference in the formulae of combination of elongation and division according to the order of the internodes. For instance, take *Vicia faba* and compare its first, second, third, and fourth internode with those of normal seedling. They are 17.53, 17.53, 13.91, and 5.00 times longer than the normal ones, while the length of the cells are respectively 10.43, 4.39, 1.65 and 0.55 times as much as the normal ones, by which we notice that in case of cells the length is smaller according as the internode goes up, while the rate of division is respectively 16.85, 3.98, 8.69 and 9.09. This table shows that within the first and second internode, the exaggerated elongation within the internode takes place by the exaggerated elongation of the cells and the divisional increase, but with the 3rd and 4th internode the exaggerated elongation takes

place by the increase of the division of the cells.

The exaggerated elongation of the internode in case of the etiolated seedling of the legminous plants observed from the elongation and division of the cells may be reduced to the following formula (refer to Mashima 1957).

(1) the case when caused by both elongation of cells and increasing of their division.

a. elongation rate > division rate

Lupinus perennis (hypocotyl), *Mimosa pudica* (〃), *Phaseolus vulgaris* (1st internode), *Canavalia ensiformis* (〃), *Vigna sinensis* (〃), *Pisum sativum* *Lathyrus odoratus* (〃), *Vicia sativa* (〃)

b. elongotion rate < division rate

Canavalia entiformis (hypocotyl), *Vigna sinensis* (〃), *Pisum sativum* (2nd, 3rd internode)

c. elongation rate≒division rate

Phaseolus radiatus var. (1st internode).

(2) the case when caused by elongation of cells only.

a. division rate≒1

Astragalus sinicus (hypocotyl), *Dolichos lablab* (1st internode), *Glycine soja* (〃)

b. division rate < 1

Lupinus perennis (1st internode). *Vicia sativa* (2nd internode)

(3) the case when caused by increasing of cells only.

a. elongation rate≒1

Cassia torosa (hypocotyl)

b. elongation rate < 1

Vicia fava forma *ascendens* (4th internode), *Pisum sativum*-Giant white (5th internode).

On the formula in the growth of leaves

Various differences may be observed in the degree of growth of leaves of the etiolated plants according to the varieties of the plant. Mac Dougal (1903) explains the various aspects of the growth of the etiolated plants as follows: "...... the reacting any leaf to darkness seems to depend upon structural causes to some extent, and is not conformable to any phylogenetic features of the species involved." J.H. Priestly (1925) observing the remarkable growth of the leaves of *Phaseolus multiflorus* as compared with the leaves of *Vicia faba* and of *Pisum sativum*

suspects that this is due to the endodermis reacting upon the stalks. T. Araki and Hamada (1939) put their explanation to the influence of light intensity upon the upper, middle, and lower parts of the coleoptyl of *Avena sativa*, in which the ratio of the growth and inhibition differs. In my case, I have taken up how the primary leaf (most epigenous) and the first complete leaf (most hypogeous) react upon the dark, in which how the three parts of the leaf, lamina, petiole, and stipule grow, in what degree each of them grow and in what relation they are each other as compared with that of nominal germination were studied, the result of which is as follows.

Various degrees of growth are noticeable in each case of leaf, leaflet, and stipule in contrast to those of normal growth, as these figures show, they are generally smaller than those of the normal ones. In the case of a petiole its growth is different according to the nature of the plant, that is: in constrast to the normal growth some are shorter, others are almost equal and some others are exceedingly of the exaggerated elongation. For instance, the experiments upon 3 varieties of *Phaseolus vulgaris* show that the length of the petiole is respectively 0.59, 0.45, and 0.42 times as much as those of the contrast while in case of *Vigna sinensis* and *Vicia faba* the length of the petiole is respectively 0.93 and 0.94 times as much as those of the contrast, and in case of *Arachis hypogaea*, *Lupinus luteus*, and *Phaseolus viridissimus* their length is respectively 1.87, 2.01 and 2.46 times as much as those of the contrast, a remarkably exaggerated elongation. In this case the length of the epidermal cell is respectively 3.02, 3.64 and 12.91 times as much as those of the contrast while the cell division is not noticeable. Following are the types of the etiolated leaves of the elongation of the legminousal plants specified according to the elongation of the petiole (refer to Mashima 1958).

(1) the case when both of petiole and lamina are shortened.

Phaseolus vulgaris (Shakugosun), *P. vulgaris* (Otebo), *P. vulgaris* (Uzura) *P. radiatus*, *Fisum sativum*, *Robinia pesudoacacia*, *Lupinus perenis*

(2) the case when the length of petiole is ame but only the lamina is shortened.

Vicia faba, *Vigna sinensis*, *Glycine soja* (Shiromame)

(3) the case when petiole elongate exaggeratedly but lamina is shortened.

Phaseolus viridissimus, *Glycine soja* (Kuromame), *Arachis hypogaea*, *Lupinus luteus*.

(4) the case when leaf is hardly developed and remains in embryonic condition.

Astragalus sinicus, *Fueraria hirsuta*, *Robinia hispi'a*, *Trifolium repens*, *Vicia sativa*.

Literatures

(1) Mac Dougal, D.T. (1903): The Influence of Light and Darkness upon growth and development. Mem. New York Bot. Garden. **2.** (2) Kraus, G. (1869): Ueber die Ursachen der Formänderungen tiolirender Pflanzen. Jahrb. f. Wiss. **7.** (3) Sachs, J. (1892): Gesammelte abhandlungen über Pflanzenphysiologie I. (4) Fukuda, Y., T. Takaoki & T. Fujita (1952): Studies on Dark-etiolation in *Hydrrillia*. Jour. Sci. Hiroshima Univ. Set. B, Div. 2, **6.** (5) Mashima, M. (1957): On Elongation and Division of Epidermal Cell in Etiolated Seedling of Leguminosae (in Japanese). Memoirs of Dep. of Liberal Arts of Shiga Univ. **7.** (6) Priestly, J. H, (1925): Light and Growth 1. The Effect of Brief Light Exposure upon Etiolated Plants. New Phyt. **24.** (7) Araki, T. und H. Hamada (1937): Lokalisation der lichtempflndlichen Zonen von Keimorganen bei *Avena sativa* (in Japanese). Bot. Mag. **51.** (8) Mashima, M. (1958): Growth-types of Leaves in Etiolated Seedlings of Leguminosae. Memo- irs of Dep. of Liberal Art of Shiga univ. **8.**

摘　　　要

双子葉植物における芽生の黄化形態すなわち節間の過伸と葉の縮少に関して，マメ科植物を材料として若干の考察を試みた。

節間の過伸について： 節間の過伸がそれらの細胞の伸長と分裂のいかなる組合せの結果をひき起こされるものであるかを個体，節間別に調査したところ，次の場合が見られる。

a. 細胞の過伸と分裂の増加によるもの： ハウチワマメ(胚軸)，ナタマメ(同)，オジギソウ(第1節間)，インゲン(同)，その他多くの胚軸および節間。

b. 細胞の過伸のみによるもの(分裂の増加は伴わない)： レゲソウ(胚軸)，ダイズ(同)，フジマメ(第1節間)，ヤハズエンドウ(第2節間) 等。

c. 細胞の分裂の増加のみによるもの(細胞の過伸は伴わない)： ハブソウ (胚軸)，ソラマメ(第4•5節間)，エンドウ(同)。

黄化葉の生長型について： 葉片あるいは小葉片，托葉の大きさは総じて縮小するのであるが葉柄の長さには短縮するもの，ほとんど変化のないもの，過伸するものとが見

え出されたので，葉柄の長さを基準にして，黄化豆芽生の葉の生長を見ると次の型に区別することができる。

a. 葉柄と葉片または小葉片がともに縮小するもの：インゲン，アズキ，エンドウ等。

b. 葉柄の長さは変化はないが，葉片または小葉片は縮小するもの：ソラマメ，ササゲ ダイズ(白豆)。

c. 葉柄は過伸するが，葉片または小葉片は縮小するもの：ナンキンマメ．キバナハウチワマメ，ダイズ(黒豆)，*Phaseolus viridissimus*.

d. 葉はほとんど発育せず，胚的状態にとどまるもの：レンゲソウ，クズ，*Robinia hispida*, シロツメクサ等。

○ Bells of Ireland とはなんでしょう（久内清孝） Kiyotaka HISAUCHI: What is Bells of Ireland?

米国ミシガン州デトロイト市の Lohrman Co. 発売の Bells of Ireland というものの種子が手に入ったがそれがなんであるかさっぱり見当がつかないので，とにかくまいて見たらシソ科に属する *Moluccella laevis* L. という地中海岸を原産地とするもので，すでに石井勇義氏の園芸大辞典第1巻（1944）にカイガラサルビア Molucca-balm, Shell flower の名で図が出ているし，石井，穂阪共著原色園芸植物図譜第5巻（1958）には更にカイガラソウの名を追加してあり，両者ともほとんど同じような内容の記事をかかげ昭和初年頃千葉大学園芸学部で初めて栽培したとかいてあるが Bells of Ireland という名は見当らないのみならず，Bailay の百科辞典にもなく，そうしていつどこでだれがつけた名か知ることができない。しかし欧米ではかなり古くから shell flower の名でしられている。とにかく奇ばつなもので，緑色コップ形の合弁蕚が横に向き，そのなかに白色の唇形花冠が発達し花は細長く，2裂した下唇弁が蕚内をかざる。花後蕚は乾燥してコップ形を保つので，そのまま，または着色して乾燥花の材料になるという。

Seeds distributed by Messrs. Lohrman Co., Detroit by the name of Bells of Ireland is *Moluccella lavis* L. The origin or bibliography of this name remains unknown.

Askell LÖVE* & Shoichi KAWANO**:

A note on amphi-pacific *Lysichitum*

アスケル, レーヴェ*・河野昭一**: **周太平洋性ミズバショウ属について**

The genus *Lysichitum*, originally separated from the Linnaean *Dracontium* by Schott (1857), was thought to be a monotypic amphi-pacific genus until it was shown by Hultén and St. John (1931) that the western North American populations differ from the eastern Asiatic ones in several characters, the most evident ones being the colour of the spathe and the scent of the flowers. Since the authors were convinced that the American taxon could not be conspecific with *L. camtschatcense* (L.) Schott, as previously maintained, they distinguished is as the new species *L. americanum* Hultén & St. John. Although these taxa are doubtlessly of a common origin and must have dispersed through the Beringian region, they are nowhere sympatric at present. The northernmost localities of the Asiatic plant are in southern Kamtchatka, whereas those of the American plant are on the Kenai Peninsula, Kodiak Island and Sitka in Alaska.

Although both species have been cultivated in Botanical Gardens, almost no biosystematic information has been collected from such material so far. It is known, however, that some of the quantitative differences between these taxa reported by Hultén and St. John (l.c.) are not always as distinct when they are cultivated together, and hybrids seem to be easily and naturally formed in captivity. Wherease no detailed studies have been performed on such hybrids so far, there seem to be indications that the yellowish colour of the spathe of the American plant may be clearly dominant over the white spathe of the Asiatic taxon, but the strength of the odour is less easily evaluated, and so is also the inheritance of some of the other characters. Further studies on controlled hybrids are desirable before any conclusios can be drawn as to the number and inheritance pattern of genetical differences between these taxa.

The chromosome number of *Lysichitum* remained unknown until 1960, when Sokolovskaya reported the number 2n=28 for material of *L. camtschatcense* from Sakhalin. The present writers are able to report the same tetraploid number

* Institute Botanique de l'Université de Montréal, Montréal, Canada.
** Botanical Institute, Faculty of Agriculture, Hokkaido University, Sapporo, Japan. 北海道大学農学部植物学教室.

for plants of *L. americanum* of western American provenience cultivated in the Montreal Botanical Garden. Hence, the two taxa do not exhibit differences in chromosome number. Although similarities in chromosome number are not conclusive evidence for close relationship (cf. Löve, 1960), this observation taken together with the ease with which these taxa hybridize in gardens perhaps indicates that they have been classified too highly when separated at the species level.

The amphi-pacific plants, of which *Lysichitum* is a typical example, seem to represent all stages of evolution, from that of taxa apparently identical on both sides of the ocean, to well defined species occupying areas now distinctly separated by a large gap in the Bering Sea region. It can be inferred from the distribution and differentiation of these plants that they have dispersed to their present ranges during different periods, although each and all must have occupied the Beringian region at some time. There are also indications that all these taxa may be true vicariads that can be expected to exhibit the same chromosome number on both sides of the ocean (cf. Löve, 1954, 1955). This is evident for the two taxa of *Lysichitum*, which have certainly differentiated gradually after their connecting populations in the northern Pacific area became extinct, perhaps even as late as during or immediately after the last glaciation.

The corresponding but older and historically perhaps more uniform group of amphi-atlantic plants have been intensely studied for more than half a century (cf. Hultén, 1958), mainly because of their significance for the discussions of survival of plants in northern regions during the Pleistocene glaciations. The amphi-pacific plants, however, have only been studied very preliminarily as a group, and even a comprehensive review of their occurence is still lacking. It is to be hoped that this remarkable group soon will become a subject of combined geobotanical and biosystematic investigations, since such studies can be expected to reveal many facts of great importance to the understanding of the history of these plants in particular and of methods and principles of gradual speciation in general.

Literature cited

Hultén, E. 1958: The amphi-atlantic plants and their phytogeographical connections.-Kgl. Vetensk. Akad. Handl. IV Ser., 7, 1: 1-340.

Hultén, E. and St. John, H. 1931: The American species of *Lysichitum*.-Svensk. Bot. Tidskr. **25**: 453-464.

Löve, A. 1954: Cytotaxonomical evalutaion of correspoding taxa.-Vegetatio **5-6**: 212-224.

——— 1955: Biosystematic remarks on vicariism.—Acta Soc. pro Fauna et Flora Fennica **72,** 15: 1-14.

——— 1960: Taxonomy and chromosomes -a reiteration.—Feddes Repert. **62**: 192-202.

Schott, H. G, 1857: Aroideen-Skizzen. Oesterr. Bot. Wochenbl. **7**: 62-63.

Sokolovskaya, A. P. 1960: Geograficheskoye rasprostraneny poliploidnich vidov rasteny (issledovanie flory o. Sakhalina).—Vestnik Leningrad. Univ. No. 21, Ser. Biol., Vyp. **4**: 42-58.

摘　　　要

Lysichitum (または *Lysichiton*) 属は *L. camtschatcense* および *L. americanum* の2種より成る小さな属で，その分布域はそれぞれ北太平洋岸沿いに広がっている。両種は 2n=28 の染色体を持ち，外部形態上の区別も簡単につく。しかし雑種ができるところよりみると，両種間の sterility barrier は幾分弱い。Sterility barrier をもって種集団を区別するという考え方は重要ではあるが，これには多様な現象が含まれており，現在の段階では機械的に論じさることはできない。北太平洋地域には種集団の分化という見地より検討すべき恰好の材料が数多くあることを附け加えておきたい。

□大窪昌章遺作 北村四郎，村田 源考定解説：**本草摺影** 京都書院 30cm 版 ¥7,500 図版 250 図 600 (IV 1961) 江戸後期における名古屋の本草家大窪昌章遺作の一部を撰たく複刻したもので，解説と名称考定がついているので当時用いられた名称と現在のそれとの変遷過程がわかる。また種ごとに学名が考定してある。またあるものについては先蹤があてちがいをしていた事実も明かにされ，まことに類例のない興味深い珍刊行物である。(久内清孝)

□A. Pilát: **Gasteromycetes** 864 pp. 256 figs. チエッコスロバキア科学アカデミー 87.50 クラウン (1958)——K. Cejp: **Oomycetes** I 480 pp. 168 figs. 52.50 クラウン (1959) チエッコスロバキア科学アカデミーの Novák の監修による Flora ČSR は4種に分れ A は藻類，B は菌類及地衣類，C は蘚苔類，D は其他となって居り B(1)，B(2) がそれぞれ上記の書となっている。新しい Taxa が盛られて居り，チエッコ語である点が苦手であるが多くの挿図とラテン語による属の記載及種の索引が役に立つ。(小林義雄)

Isamu UMEZAKI*: Some new and noteworthy species of genus *Punctaria* (brown algae) from Japan

梅 崎　勇*: 日本産褐藻類ハバモドキ属の 1 新種と 2 珍種について

(Pl. VI)

From the Japanese coast are known six species of *Punctaria*, Punctariaceae, brown algae: *P. latifolia* Grev. (Okamura 1916, '36: Yamada 1928: etc.) and *P. plantaginea* (Roth) Grev. (Yendo 1909: Okamura 1927, '36: Yamada and Tanaka 1944: etc.) are common on our coasts: *P. tenuis* Yamada et Iwamoto, *P. kinoshitae* Yamada et Iwamoto are new species reported by Iwamoto in 1960 as growing in Lake Saroma, Hokkaido: and *P. flaccida* Nagai, which is dealt with in this paper, was originally reported by Nagai in 1940 from Kunashiri Island, Kuriles, and in 1944 Yamada and Tanaka found it at Akkeshi, Hokkaido, which seem to be the second new locality for the species.

The present paper deals with three species of genus *Punctaria*: *P. pilosa* is new to science: *P. chartacea* Setchell et Gardner is new to the Japanese marine flora: and *P. flaccida* Nagai is described to have unilocular sporangia on it, which is a new record for the species. The type and other specimens herepexamined are deposited in the Herbarium, Department of Fisheries, Faculty of Agriculture, Kyoto University, at Maizuru. The writer wishes to express his heartfelt thanks to Prof. Y. Yamada, Hokkaido University, for his revising the manuscript.

1. **Punctaria flaccida** Nagai, Journ. Fac. Agr., Hokkaido Imp. Univ. **46**: 36, pl. II, figs. 12, 13 & pl. III, fig. 7, 1940: Yamada and Tanaka, Sci. Pap. Inst. Algol. Res., Fac. Sci., Hokkaido Imp. Univ. **3**: 59, 1944.

The plants epiphytic, solitary or slightly gregarious, flaccid, linear-lanceolate, with blunt apices and with sharply narrowed bases, 2–7cm long, 3–12mm broad, composed of four layers of cells, 60–90μ thick; the medullary cells slightly larger than the cortical cells. Unilocular sporangia scattered on both surfaces of plant, immersed among cortical cells, oblong or ellipsoidal in shape, 34–38μ×21–38μ in size in the vertical section. Plurilocular sporangia unknown. Fig. 1 a–b.

* Department of Fisheries, Faculty of Agriculture, Kyoto University, Maizuru, Japan. 梅崎 勇, 京都大学農学部水産学教室.

Japanese name: Chishima-habamodoki (nom. nov.).

Habitat and locality: Epiphytic on *Phyllospadix Scouleri* Hook. Aininkappu, Akkeshi, Hokkaido. *Umezaki 2753*, 27 July 1953.

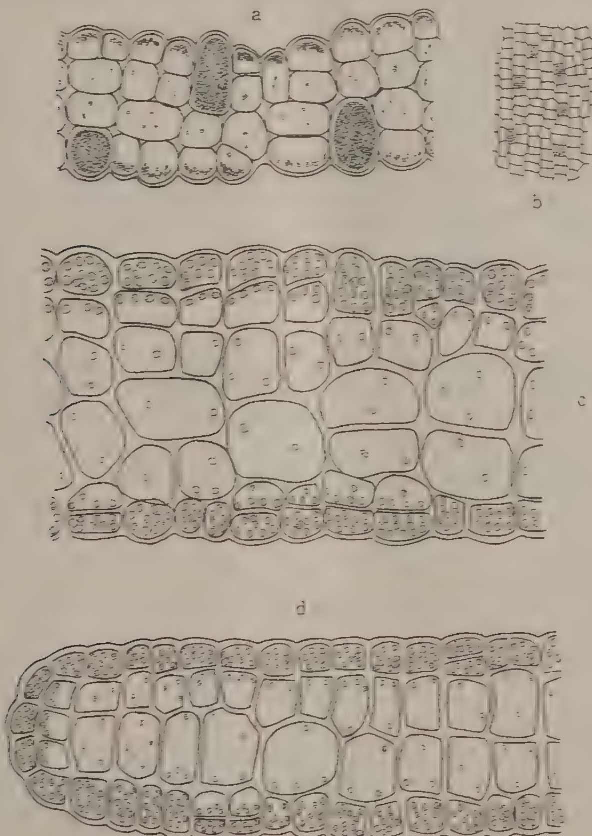


Fig. 1. a-b. *Punctaria flaccida* Nagai. a. Cross section of a plant, with unilocular sporangia. ×170. b. Surface view of plant, with unilocular sporangia. ×50. c-d. *Punctaria chartacea* Setchell et Gardner. c. Cross section of a plant. ×170. d. Cross section of the marginal portion of a plant. ×170.

Punctaria flaccida was recorded from Tomari, Kunashiri Island, southern Kuriles, as new by Nagai in 1940, when he did not find unilocular sporangia on the type plant, although discovered plurilocular sporangia. In 1940, Yamada and Tanaka found it in the vicinity of the Akkeshi Marine Biological Station, Hokkaido University, where the materials here examined were also collected by the present writer in July 1953, but they did not give any description and figure in their paper (l. c.). Fortunately, the writer's plants have many unilocular sporangia on which careful observations are made in this study. The unilocular sporangia are formed on both surfaces of the plant, usually scattered in solitary fashion, sometimes in small groups. They are immersed among the cortical cells and are larger in size than the other vegetative cells oblong or ellipsoidal in the vertical view. The present discovery of unilocular sporangia is the first record for the species. No plurilocular sporangium has been found in this collection.

2. **Punctaria chartacea** Setchell et Gardner, Univ. Calif. Publ. Bot. **8**: 521, pl. 45, fig. 79 & pl. 81, 1925.

The plants membranaceous, chartaceous, rigid, linear to broadly elliptical, rugged on the surfaces, the margins fimbriate, (8)–15–25cm long, (5)–8–12cm broad, attached, by a very small disk, 90–130μ thick, composed of (5)–6–7 layers of cells; the cortical cells much smaller than the medullary cells, with dense chromatophores. Plants dark brown, the colour not changing on drying, not adhering at all to paper. Hairs, uni- and plurilocular sporangia unknown. Fig. 1 c-d.

Japanese name: Gasagasa-habamodoki (nom. nov.).

Habitat and locality: Washed ashore. Muroran, Hokkaido. *Umezaki 2751*, 14–15 July 1953.

A large number of specimens were found washed ashore on the coast of Muroran, Hokkaido, in the middle of July, 1953. The base of the plant is very small and acutely attenuated; therefore, it appears to be detached from its substratum, especially at the occasion of heavy waves. Setchell and Gardner (l. c.) did not observe hairs, uni- and plurilocular sporangia in their type specimens from Sitka, Alaska. The present specimens have no hairs, uni- and plurilocular sporangia either. The plant is more rigid than that of *Punctaria plantaginea* which it superficially resembles. This is a new record for the Japanese marine flora.

3. **Punctaria pilosa** Umezaki, spec. nov.

Planta epiphytica, gregaria rarius solitaria, linearis vel late linearis, apice obtusa basi attenuata margine non undulata, 4–7.5cm alta, 0.5–1.8cm lata, tenuis'

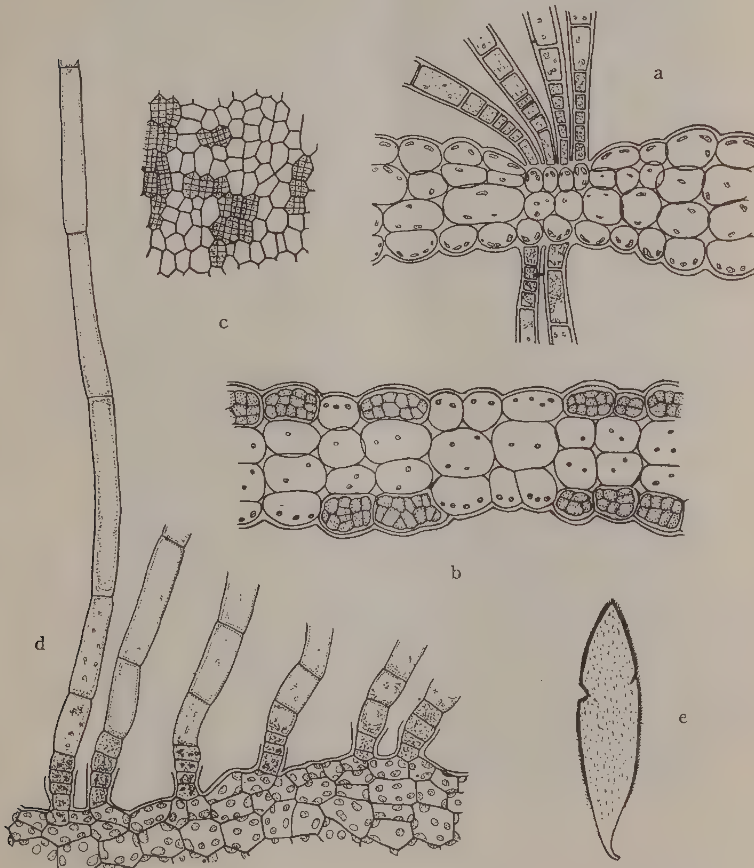


Fig. 2. *Punctaria pilosa* Umezaki. a. Cross section of a plant, with two groups of hairs. ×170. b. Cross section of a plant, with plurilocular sporangia. ×170. c. Surface view of a plant, with plurilocular sporangia. ×100. d. Hairs on the marginal portion of a plant ×170. e. A plant showing an arrangement of hairs along its marginal portion. ×2/3

60–70μ crassa, cellulis plerumque 4 rarius 3 stratosis; cellulis medularibus parvis magnioribus quam corticaribus, perpendiculies 15–24μ×16–36μ crassis; celluris corticalibus superficies 12–18μ×21–36μ crassis, perpendiculies 12–20μ×12–20μ crassis. Sporangiis pluriloculraibus supra utras frondium sparsis, plerumque gregariis, non aut parvis projectis. Sporangiis unilocularibus ignotis. Pilis aggregatis paucis vel solitariis, margine frondium numerosis. Planta dilute fuscescens, siccicate charte firme adhaeret.

The plants epiphytic on *Sargassum*, gregarious, rarely solitary, linear or broad-linear, above obtuse, attenuating in a short stipe at base, not undulate at margine, 4–7.5cm long, 0.5–1.8cm broad, thin, 60–70μ thick, composed of usually 4, rarely 3 layers of cells; the medullary cells a little larger than the cortical ones, 15–24μ×16–36μ in size in the vertical view; the cortical cells 12–18μ×21–36μ in size in the surface view, 12–20μ×12–20μ in size in the vertical view. Plurilocular sporangia scattered on both surface of plant, usually gregarious, not or slightly projected on the surfaces. Unilocular sporangia unknown. Hairs in small groups or solitary, numerous along the margine of plant, sparse on both surfaces of plant. Plants pale brown, adhering firmly to paper on drying. Pl. I; fig. 2.

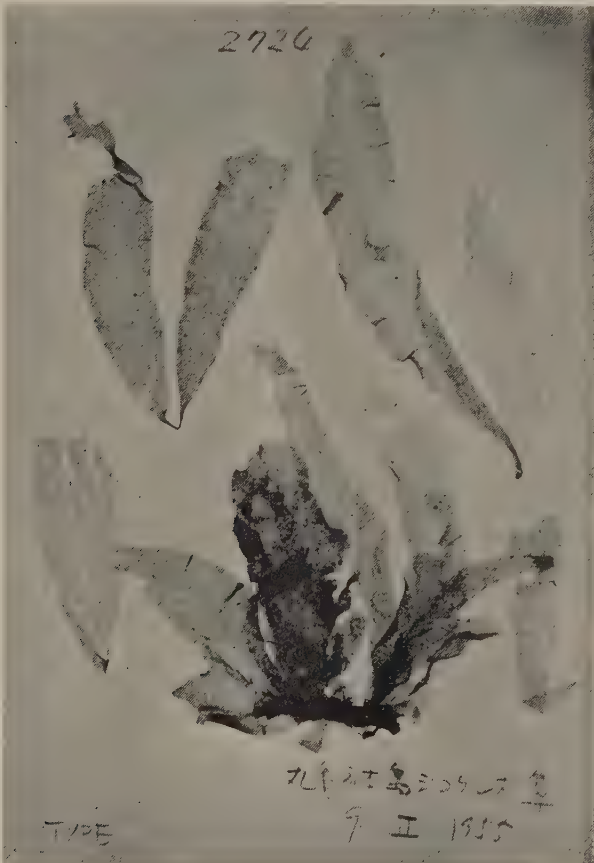
Japanese name: Kebuka-habamodoki (nom. nov.).

Habitat and locality: Epiphytic on *Sargassum patens* C. Ag. Hon-jima, Shiaku, Seto Inland Sea. *Umezaki 2724*, 9 February 1955. (TYPE)

The new species of *Punctaria* is closely related to *P. tenuis* Yamada et Iwamoto (1960) which was found growing on *Zostera* in Lake Saroma, Hokkaido, but it can be easily distinguished from the latter alga by its smaller frond and by the internal structure, which is usually composed of four layers of cells. Moreover, the plant is not undulated at its margin. Numerous solitary hairs are issued along the margin of the plant; this is a feaure peculiar for the species. (See fig. 2 d, e).

Literature cited

Iwamoto, K. (1960) Journ. Tokyo Univ. Fish. **46**: 21–49, pls. 1–15. Nagai, M. (1940) Journ. Fac. Agr., Hokkaido Imp. Univ. **46**: 1–137, pls. 1–3. Okamura, K. (1916) Icones of Japanese Algae **4** (1): 1–19, pls. 151–155. ——— (1927) Sci. Rep. Tohoku Imp. Univ. IV, Biol. **3**: 1–17. ——— (1936) Nippon Kaiso-shi. Tokyo. Setchell, W. A. and N. L. Gardner (1925) Univ. Calif. Publ. Bot. **8**: 383–898, pls. 34–107. Yamada, Y. (1928) Sci. Rep. Tohoku Imp. Univ. IV, Biol. **3**:



Punctaria pilosa Umezaki. The type specimen. ×1.

I. Umezaki : *Punctaria* from Japan

497-534. Yamada, Y. and T. Tanaka (1944) Sci. Pap. Inst. Algol. Res., Fac. Sci., Hokkaido Imp. Univ. **3**: 47-77, pl. 8. Yendo, K. (1909) Bot. Mag. Tokyo **23**: 117-133.

○牧野標本館雑記 (4) Kôzô HIYAMA : Miscellany from Makino Herbarium (4)

新称植物のつづき オオユキザサ: 羽後国月山産の標本上で命名。3 枚あるうちの 2 枚がヒロハノユキザサ (*Smilacina yesoensis* Fr. & Sav.) で, 他の 1 枚はオオバユキザサ (*S. hondoensis* Ohwi) である。以上の標本は採者も採集年も不明であるが, 牧野先生の採集品であるらしい。

ヤクシマグミ: 大隅国屋久島の山頂付近 (田代善太郎, 年月不明) 産の標本上に, これは同名のヤクシマグミ (正宗厳敬, 1929 年—*Elaeagnus yakusimensis* Masam.) と同物である。

シマカンアオイ: 奄美大島古見 (1901 年 4 月 4 日, 田村慶助) 産の標本上に。これはフジノカンアオイ (*Heterotropa Fudsinoi* F. Maek.) である。

スズメギキョウ: 沖縄中頭郡越来 (1922 年 4 月, 記入はないが坂口総一郎氏の採品?) 産の標本上で。*Lobelia liukiuensis* Makino, sp. nov. と学名が併記されている。この名は坂口氏の沖縄植物総目録 8 頁 (1924 年) に載せられているが, これはタチミゾカクシ (山本由松, 1929 年—*Lobelia Hancei* Hara) と同じであるから, タチミゾカクシという和名は異名となる。

オニタネツケバナ: 下野国日光千手ケ原 (1928 年) 産の標本上に, これはオクヤマガラシ (*Cardamine torrentis* Nakai) である。

テマリゴマギ: 磐城国三春 (1901 年 9 月 4 日, 服部保義産) の標本上で, これはヤブデマリ (*Viburnum* Thunb. var. *tomentosum* Miq.) そのものであった。(牧野標本館)

○ イヌヤマモモソウが呉市でとれた (久内清孝) Kiyotake HISAUCHI : *Gaura parviflora* collected in Kure City as a casual.

呉市の太刀掛優氏から送られた標本を検したところ, それがイヌヤマモモソウ *Gaura parviflora* Dougl) であった。恐らく本州の野外で見つかった事実として記録するに足る新事実であろう。わが国には明治時代に渡来していて当時この和名が小石川植物園で, 与えられたもので, そのときの標本が東大のおし葉庫にある。九州では故田代美太郎氏が 1915 年 6 月に鹿児島県加治木でとられ, その標本が手元にあるが, その頃はまだ和名はなかったようである。

Yoshiharu KUWABARA*: **On the shape and the direction of leaves of grass seedlings**

桑原義晴*: **イネ科幼苗の形態と葉の開出の方向について**

The writer already published the systematic significance of the first leaf in this Journal **35**: 139–145 (May 1960). In this paper the subsequent result obtained thereafter is given. Up to now the seedlings of 57 grass species were observed by myself. Tab. 1 shows the summary of my additional observations.

1) According to Avdulev (1931), the first seedling leaf of grasses can be divided into 2 distinct types, but the writer concludes that the first seedling leaf of grasses is divided into 3 types according to the direction and the shape of the leaf.

(1) Perpendicular type (type I—Fig. 1. A—a, c)

(2) Ascendant type (type II—Fig. 1. B—e, g)

(3) Horizontal type (type III—Fig. 1. C—i)

Type I, the first seedling leaf standing perpendicularly, and the leaf mostly linear or narrowly linear, leaf apex acute (Fig. 1. A-1, 2), the length/width ratio mostly 15.0–35.0, and the value of the first leaf ratio is the largest, but, as to the second or third, it gradually tends to be smaller (Fig. 2), example: Pooideae.

Type II, the first seedling leaf inclines almost ascendently, the leaf mostly linear or oblong-lanceolate, leaf apex acute or obtuse (Fig. I. B-3, 4), the length/width ratio mostly 3.5–15.0, and the value of the first leaf ratio is the smallest, but, as to the second or third, it tends to be larger and larger (Fig. 3, 4), example: Arundoideae—*Glyceria*, Eragrostoideae—*Eragrostis*, *Muehlenbergia*, Panicoideae—*Setaria*, *Paspalum*.

Type III, the first seedling leaf grows almost horizontally, the leaf mostly oval to round-oval, leaf apex obtuse or rounded (Fig. 1. C-5), the length / width ratio mostly 1.3–2.2, and the difference of the ratio value between the first leaf and the above second is not seen remarkably (Fig. 5), example: Panicoideae—*Arthraxon*, *Microstegium*.

As described above, the shape and the direction of the first seedling leaf are useful features as the characteristics of systematic grouping of grasses. But looking into various kinds, considerable exceptions are seen. As already reported, the 3

* Kutchan High School, Hokkaido, Japan. 北海道倶知安高等学校.

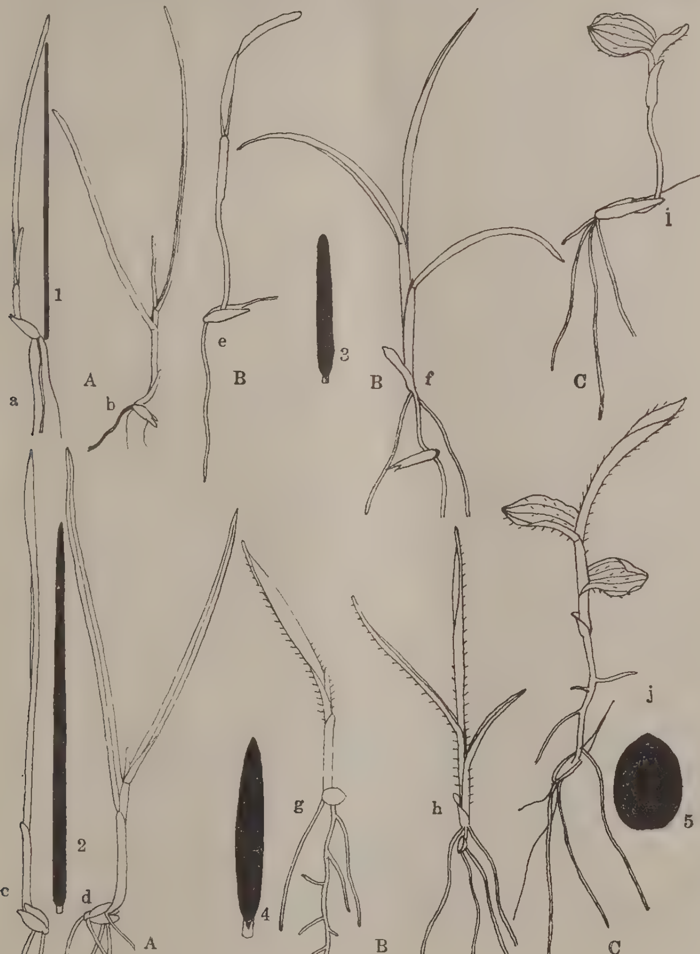


Fig. 1. The shape and the direction of leaves. a,c. Perpendicular type. e, g. Ascendant type. i. Horizontal type. a, b. *Festuca elatior* Linn. c, d. *Phararis canariensis* Linn. e, f. *Muehlenbergia longistolon* Ohwi. g, h. *Paspalum thunbergii* Kunth. i, j. *Microstegium vimineum* A. Camus var. *polystachyum* Ohwi. 1-5. The shape of leaves of each type.

types do not always agree with the systematic groups. The seedlings of Arundoideae resemble Eragrostoideae, but the first seedling leaf is linear and leaf apex acute or obtuse, the length / width ratio mostly 15.0–25.0. Still more, in the succesion of the seedling leaf the interesting characteristic is seen. For example, the second leaf of *Bromus* or *Elymus* is supressed untill full development of the first seedling leaf. On the contrary, that of *Setaria* appears before the first seedling leaf is mature.

2) In 2–5–leveled seedlings, there are also 3 types according to the leaf shape and the direction.

(1) The leaf ascendant, and grows almost aslant straightly (type **I**-Fig. 1. A-b, d, B-h), example: Pooideae—*Festuca*, *Bromus*, *Elymus*, *Beckmannia*, *Halaris*, *Anthoxanthum*, Panicoideae—*Faspalum*.

(2) The leaf ascedant, but curves toward the outer side (type II—Fig. 1. B-f), example: Arundoideae—*Glyceria*, Eragrostoideae—*Eragrostis*. *Muehlenbergia*, Panicoideae—*Setaria*.

(3) The leaf grows almost horizontally (type III—Fig. 1. C-j), example: Panicoideae—*Panicum*, *Digitaria*, *Arthraxon*, *Microstegium*.

As described above, the relationship between the systematic groups and the types of the 2–5–leaved seedling leaf is not seen so close as that of the first seedling leaf. Especially the 2–5–leaved seedlings of Type II include many systematic groups. However, type I is seen mostly in Pooideae, and type III in Panicoideae. Generally speaking, the type I, II, III of the first seedling leaf mostly tends to move to the type I, II, III of the first seedling leaf respectively. These features can be adopted as the characteristics of species or genera.

3) Fig. 2–5 shows the relationship of the increasing length and width of the successive leaves in 4 species of grasses. These curves also represent the characteristics of species or genera.

Literature cited

I. G.L. Stebbins and B. Crampton: Outline for a new system of classification of the Gramineae. (1959).

摘　　　要

イネ科植物の幼苗第1葉の分類学的特徴は，葉の形態・長さと幅の比・葉の先端・葉脈の数・色・毛の有無などに現われているが，また，葉の開出の状態にもその特徴がみ

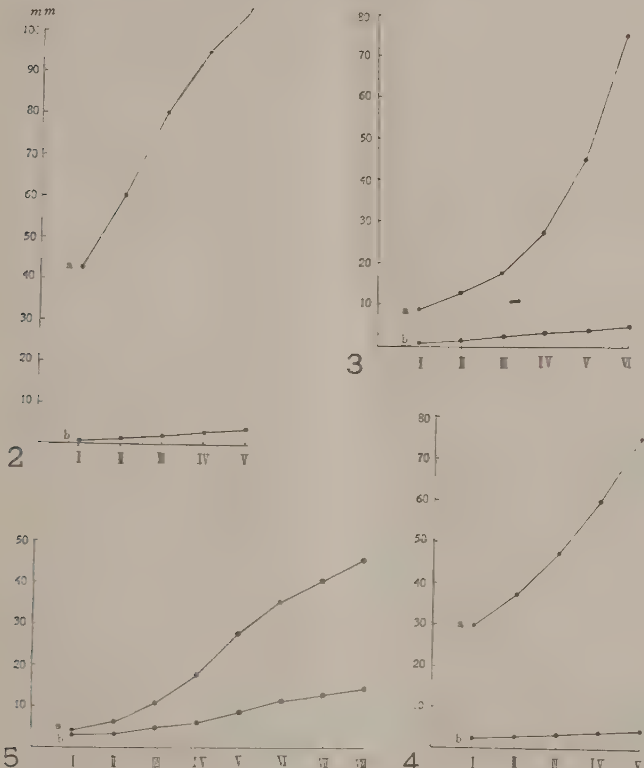


Fig. 2-5. The length (a) and the width (b) of leaves (I, II...indicate the leaf number) in 4 species. 2. *Festuca elatior* 3. *Eragrostis ferruginea.* 4. *Paspalum thunbergii* 5. *Microstegium japonicum.*

The length / width ratios of them are follows :

Species	I	II	III	IV	V	VI	VII	VIII
2	106.5	44.4	40.0	31.7	31.3			
3	11.3	10.0	7.0	8.3	11.3	15.0		
4	12.0	13 4	14.6	16.2	16 7			
5	1.5	1.9	2.2	2 9	3.2	3.2	3.2	3.2

Tab. 1. The features of the first seedling leaf.

Species	shape	leafapex	length (mm)	width (mm)	length / width	direction
Pharoideae						
Zizania latifolia Turc.	lanceolate	acute	3.0–4.0	1.0	3.5	a.
Arundoideae						
Achnatherum pekinense Ohwi	linear	acute	40.0–48.0	1.0–1.3	38.3	p.
Glyceria ischyroneura	linear	acute	10.0–15.0	0.7–0.9	15.6	a.
G. viridis Honda	linear	acute	15.0–25.0	0.8–1.0	22.2	a.
G. leptolepis Ohwi	linear	acute	10.0–15.0	0.6–0.8	17.9	a.
G. alnasteretum Komar.	linear	acute	10.0–13.0	1.0–1.1	10.9	a.
Pooideae						
Festuca rubra L. var. *rubra* Linn.	linear	acute	15.0–22.0	0.5–0.6	33.6	p.
Bromus mollis Linn.	linear	obtuse	30.0–40.0	1.0	35.0	p.
Agropyron tsukushiense Ohwi var. *transiens* Ohwi	linear	acute	25.0	1.0	25.0	p.
Elymus mollis Trin.	linear	acute	45.0–70.0	1.8–2.0	30.0	p.
E. dahuricus Turcz	linear	acute	40.0–50.0	1.5–1.8	27.2	p.
Avena sativa Linn.	linear	obtuse	45.0–70.0	3.5–4.5	14.4	p.
Phalaris canariensis Linn.	linear	acuminate	55.0–75.0	1.8–2.0	34.2	p.
P. arundinacea Linn	linear	acuminate	18.0–25.0	1.0–1.2	19.5	a.
Agrostis hiemalis Britt.	linear	acute	10.0–13.0	0.2	57.5	p.
Eragrostoideae						
Eragrostis ferruginea P. Beauv.	linear	acute	6.0–12.0	0.5–1.0	12.0	a.
Cleistogenes hackelii Honda	linear	acute	3.0–5.0	1.0–1.2	3.6	a.
Sporobolus elongatus R. Br.	linear	acute	8.0–15.0	0.6–0.9	15.3	a.
Muehlenbergia longistolon Ohwi	oblanceolate	obtuse	10.0–15.0	0.8–1.1	13.2	a.
Panicoideae						
Pennisetum alopecuroides Spreng.	linear	acute	12.0–17.0	2.0	7.3	p.
Microstegium vimineum A. Camus var. *polystachyum* Ohwi	round-oval	rounded	5.5–8.5	4.0–5.0	1.6	h.
M. japonicum Koidz.	round-oval	rounded	4.5–5.0	3.0–3.5	1.5	h.

p : perpendicular. a : ascendant. h : horizontal.

みられる。すなわち、第1葉が地表に対して垂直に抽出する型（第I型）―イチゴツナギ亜科の大部分、斜めに抽出する型（第II型）―スズメガヤ亜科の大部分とキビ亜科の一部、水平に抽出する型（第III型）―キビ亜科のキビ属・メヒシバ属・コブナグサ属・アシボソ属など、の三つの型が認められるが、これらの型はそれぞれ亜科あるいは属の特徴を示している。

また、2-5葉期に達した幼苗の型と第1葉とに関しては、第1葉の抽出型と関係づけてみると、つぎのような関係がみられる。いま、幼苗の葉が稈上にまっすぐ立つものを第I型、葉が斜めに開き、葉身がやや外に彎曲する型を第II型、開出・水平に開くものを第III型とすると、第II型には、ダンチク亜科のドジョウツナギ属・スズメガヤ亜科のスズメガヤ属・ネズミガヤ属・キビ亜科のエノコログサ属などの大部分がこれに含まれる。しかし、総じてI型はイチゴツナギ亜科の大部分に、また、第III型はキビ亜科の一部の属にみられる。したがって、第I葉の型Iの大部分は幼苗の型Iに、第I葉の型IIは幼苗の型IIに、また、第I葉の型IIIは幼苗の型IIIに、それぞれ移行する傾向がある。上述の如く、第2-5葉期に達した幼苗の形質も亜科の特徴として、ある程度とりあげることができる。

つぎに、葉の伸長と、節の増加との関係をみると、第1葉から第2葉、第3葉と次第に成長するにしたがって、葉の伸長より節の増加の方がいちじるしく発達するもの（例、ヒロハノハネガヤ）、葉の伸長の方が節の増加よりいちじるしく発達するもの（例、カモジグサ・スズメノヒエ）、葉の伸長と、節の増加とがほぼ平行して発達し、葉の長さと節との比にいちじるしい変化のないもの（例、アシボソ・チガヤ）など、亜科あるいは属によって、それぞれ定まった特徴が現われている。

○ タチツボスミレの一品（檜山庫三）　Kozo HIYAMA: A new form of *Viola grypoceras* A. Gray.

タチツボスミレにも、アカフタチツボスミレのように、葉面に紫褐色の斑のはいったものがある。1961年6月4日、群馬県甘楽郡西牧村神津牧場で小林茂氏が採集されたものである。かつて、私も、これを武州御岳で採集して、マダラケタチツボスミレと仮称しておいたが、標本を紛失して、そのままとなっていたものである。

Viola grypoceras A. Gray var. *grypoceras* forma **sordida** Hiyama, nov. f.

Folia supra praesertim ad nervos sordide violaceo-maculata.　Cetera ut in f. *pubescenta*.—Nom. Jap. Madaraketachitsubosumire.

Hab. Hondo: Kozu Pasture, Prov. Kozuke (S. Kobayashi, June 4, 1961 type in Makino Herbarium).

□佐野藤右衛門編　大井次三郎監修：　桜　光村書院 36cm 版、pp. 270、原色図版 101、解説英文（10 IV 1961）　¥15,000　本書はサクラことにヤマザクラ系の多くの品種を写生した原色の豪華版で、各図は頁ごとに解説がついており、いちいち大井博士が考査して学名が与えられている。恐らくサクラに興味ある人士には不可欠のものの一つであろう。（久内清孝）

Ken KATSUMOTO*: **Notes on fungi from western Japan (4)****

勝本 謙*: **西日本産菌類論考 (4)**

The Mycological flora of Japan is remarkably rich in southern tropical elements, and many characteristic species of parasitic fungi are found in Japan, especially in south-western Japan. It is unquestionable that the parasitic fungi of southern Japan are much related to those of tropical or subtropical Asia such as Formosa, Philippines or southern China, though the investigations on these fungi of southern Japan are still extremely insufficient. It is, therefore, expected that the identification of the fungi in these regions is executed as immediately as possible. The writer here described 8 species of parasitic sooty molds among which 2 species were new and 3 species were formerly known only from Formosa. The writer wishes to express his gratitude to Prof. Hino for his kind suggestion and criticism.

52. **Meliora dichotoma** Berkeley et Curtis, in Proc. Amer. Acad. Art. & Sci. **4**: 130, 1860—Saccardo, Syll. Fung. **1**: 71, 1882—Stevens, Ann. Mycol. **26**: 177, 1928—Hara, List Jap. Fungi: 198, 1954—Yamamoto, Sci. Rep. Hyogo Univ. Agr, **3**(2), Ser. Agr. Biol.: 54, 1958.

Meliora kusanoi P. Hennings, in Engl. Bot. Jahrb. **28**: 272, 1900—Saccardo, Syll. Fung. **16**: 413, 1902—Hara, List Jap. Fungi: 199. 1954.

Meliora hedera Yamamoto, in Trans. Nat. Hist. Soc. Formosa **31**: 53, 1941—Hara, List, Jap. Fungi: 198, 1954.

The colonies are amphigeneous, sparse, orbicular and somewhat irregular in shape, blackish, velvety and 2–5mm in diameter; the mycellia are reticulately abundant, erect, fuscous brown, oppositely ramose, 7–11μ in width and composed of tne cells which are 17–30μ in length; the capitate hyphopodia are opposite, sometimes alternate, numerous, 2-celled, erect or curved, oblong or clavate and 15–20×7–10μ; the mycelial setae are numerous, blackish brown, mostly once and sometimes twice dichotomous and 80–250μ in length at the primary portion, branches are slowly recurved, obtuse at the apex and 30–120μ in length; the perithecia are gregarious, globose or somewhat depressed, blackish and 200–250μ

* Laboratory of Plant Pathology, Faculty of Agriculture, Yamaguti University. 山口大学農学部植物病学研究室.

** (3): Bull. Fac. Agr. Yamaguti Univ. no. 9: 909—916. 1958.

in diameter; the ascospores are oblong, rotundate at both ends, fuscous brown, 4-septate, constricted at the septa, guttate and 38–51×13–18μ.

Hab. on the leaves and petioles of *Hedera rhombea* Sieb. et Zucc. (*Kizuta*). Wada-mura, Prov. Suô (Oct. 29, 1952. I. Hino); Mt. Kuruson, Prov. Nagato (Oct. 28, 1956. K. Katumoto).

Distrib. Japan, Formosa and Philippines.

53. **Meliora machili** Yamamoto, in Trans. Nat. Hist. Soc. Formosa **31**: 23, 1941; Sci. Rep. Hyogo Univ. Agr. **3**(2), Ser. Agr. Biol.: 77, 1958—Hara, List Jap. Fungi: 199, 1954.

The colonies are amphigeneous, sparse, orbicular or somewhat irregular in shape, fuliginous, velvety and 2–6mm in diameter; the mycelia are reticulately abundant, irregularly ramose, undulate, blackish brown and 8–11μ in width; the capitate hyphopodia are alternate, clavate, frequently curved, rounded at the apex. 2-celled and 24–30×11–15μ; the mycelial setae are long needle-like in shape, simple, mostly erect, pointed at the tips, blackish, 500–1100μ in length and 10–14μ in width; the perithecia are gregarious, globose or somewhat depressed, blackish and 190–260μ in diameter; the asci are oblong or elliptic, shortly stipitate, with two spores and 65–75×30-35μ; the ascospores are oblong or fusoid-oblong, 4-septate, rounded at both ends, constricted at the septa, fuscous or blackish brown, guttate and 52–63×20–25μ.

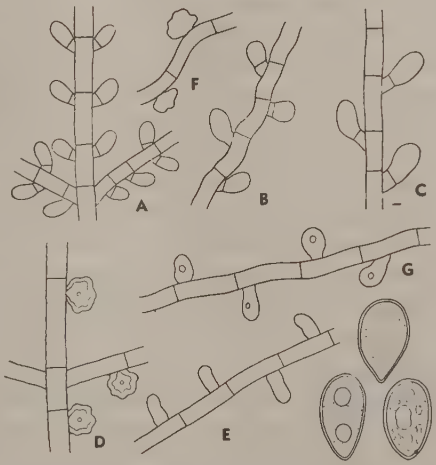


Fig. 1. A. *Meliora dichotoma*. B. *M. osmanthi*. C. *M. machili*. D. *Asterina theae*. E. *A. daphniphylli*. F. *A. violae*. G, H. *Asterostomella meliosmae*. (A-G: hyphae & hyphopodia, H: pycnospores)

Hab. on the leaves of *Machilus thunbergii* Sieb. et Zucc. (*Tabunoki*). Toyoda-tyô, Prov. Nagato (Nov. 7, 1958. K. Katsumoto).

Distrib. Formosa.

This species is new to the flora of Japan.

54. **Meliora osmanthi** Sydow, in Ann. Mycol. **18**: 157, 1920——Saccardo, Syll. Fung., 24: 330, 1926——Stevens, Ann. Mycol. **26**: 222, 1928——Yamamoto, Trans. Nat. Hist. Soc. Formosa **30**: 155, 1940; Sci. Rep. Hyogo Univ. Agr. **3** (6), Ser. Agr. Biol.: 75, 1958——Hara, List Jap. Fungi: 199, 1954.

Meliola osmanthi-aquifolii Hara, Fungi **1** (2): 13, 1931; List Jap. Fungi: 199, 1954.

The colonies are epiphyllous, sparse, orbicular or somewhat irregular, blackish, somewhat velvety and 1-3mm in diameter; the mycelia are reticulate, erect, oppositely ramose, blackish brown and 9-10μ in width; the capitate hyphopodia are alternate, oblong, 2-celled, rounded at the apex and 17-24$\times$11-13μ; the mycelial setae are needle-like in shape, simple, erect, pointed at the tips, blackish and 250-800$\times$8-11μ; the perithecia are globose, blackish, 180-260μ in diameter; the asci are elliptic oblong, with 2 spores and 60-75$\times$30-38μ; the ascospores are oblong or elliptic-oblong, 4-septate, rounded at both ends, constricted at the septa, fuscous brown and 48-60$\times$15-22μ.

Hab. on the leaves of *Ligustrum japonicum* Thunberg (*Nezumimoti*). Shimonoseki City, Prov. Nagato (Nov. 6, 1955. K. Katumoto); Toyoda-tyô, Prov. Nagato (Nov. 7, 1958. K. Katsumoto); Hôhu City, Prov. Suô (Feb. 21, 1960. K. Katumoto).

Distrib. Japan, Formosa and Hawaii.

Ligustrum japonicum is a new host plant of this sooty mold. The present fungus is not so uncommon in south-western district of Japan.

55. **Asterina daphniphylli** Yamamoto, in Sci. Rep. Hyogo Univ. Agr. **2** (2), Ser. Agr. Biol.: 34, 1956——Hino & Katumoto, Bull. Fac. Agr. Yamaguti Univ. **8**: 647, 1957.

The colonics epiphyllous, sparse or gregarious, orbicular, blackish and 3-6mm in diameteter; the mycelia are irregularly reticulate, somewhat undulate, oppositely or alternately ramose, brownish and 6-7μ in width; the capitate hyphopodia are alternate, sometimes lateral, subcylindrical, erect or frequently curved, continuous, rounded at the apex and 10-14$\times$5-6μ; the thyriothecia are gregarious, rotundate and 150-240μ in diameter; the asci are subglobose, oval or obovate, with 8 spores, 50-68.5$\times$39-49μ ond lack in paraphyses; the ascospores are ovate-oblong or oblong, 1-septate, constricted at the septum, rounded at both ends, brownish, guttate and 29-33$\times$12-14μ.

Hab. on the leaves of *Daphniphyllum teijsmanni* Zoolinger (*Hime-yuzuriha*). Udo, Prov. Hyûga (March 3, 1955. K. Katumoto); Tokushima, Prov. Oosumi (June 25, 1961. I. Hino).

Distrib. Formosa and Japan.

It was for the first time described in Formosa, though it may be widely distribution in southern Japan.

56. **Asterina theae** Yamamoto, in Sci. Rep. Hyogo Univ. Agr. **3** (1), Ser. Agr. Bol.: 27, 1957.

The colonies are epiphyllous, sparse, circular or somewhat irregular, fuliginous, crustous and 3–5mm in diameter; the mycelia are irregularly reticulate, alternately or oppositely ramose, erect, somewhat undulate, brownish and 6–8μ in width; the capitate hyphopodia are alternate or lateral, subglobose or hemispherical, sessile, continuous, undulate or a little lobate and 11.5–13.5$\times$12–18μ; the thyriothecia are gregarious, rotundate or sometimes elliptic, flattened scutiform, radiate, dehiscent at the apex, fimbriate at the margin, brownish and 250–400μ in diameter; the asci are cylindrical, rounded at the apex, with short stipes, 65–100$\mu\times$23–27μ and contain 8 spores; the paraphyses are numerous, filiform, hyaline and 60–80$\times$3μ; the ascospores are oblong, 1-septate, rounded at both ends and 30–35$\times$12–15μ.

Hab. on the leaves of *Camellia japonica* Linn. (*Yabu-tubaki*). Toyodatyô, Prov. Nagato (Nov. 7, 1958. K. Katumoto); Hônokawa-yama, Prov. Tosa (Dec. 25, 1959. K. Katumoto); Hôhu City, Prov. Suô (Feb. 11, 1960. K. Katumoto).

Distrib. Formosa

The ascospores of the writer's materials were not yet matured, but other general characteristics of the fungus were identical with those of the original description.

The present species was described in Formosa as a parasite on *Thea sinensis* Linn. It is ubiquitously found on *Camellia japonica* in south-western Japan, and it has generally been identified as *Asterina cincta* Berkeley. The type specimen of *A. cincta*, however, was incomplete and infested with *Acanthostoma* fungus, and the specific name of *A. cincta* was then erased and replaced by the name of *A. camelliae* Sydow et Butler. *A. theae* Yamamoto and *A. camellia* Sydt. et Butl. (=*Clypeolella camelliae* Hansford) strikingly resemble the fungus in question, and the reexamination of these two species of fungi seems to necessary in future.

57. **Asterina violae** P. Hennings, in Hedwigia, **41**: 63, 1902.—Saccardo,

Syll. Fung. **17**: 876, 1905——Theissen, k.k. Zool.-Bot. Gesellsch. Wien **7** (3): 100, 1913——Hara, List Jap. Fungi: 29, 1954.

The colonies are epiphyllous, gregarious, orbicular or irregular in shape, 1–2mm in diameter and frequently confluent, fuliginous; the mycelia are reticulate, undulate, irregularly ramose, fuscous brown and 3–6μ in width; the capitate hyphopodia are alternate, sessile, subglobose or elliptic, sometimes hemispheric continuous, lobate and 4–6×5–8μ; the thyriothecia are gregarious, small, stellately dehiscent at the apex, not fimbriate at the margin and 60–100μ in diameter; the asci are globose, elliptic or obovate, with 8 spores and 20–27×16–23μ; the ascospores are oblong, 1-septate, constricted at the septum, rounded at both ends, fuscous brown and 12.5–14.5×5.5–6.5μ.

Hab. on the leaves of *Viola ovato-oblonga* Makino (*Nagabano-tatitubo-sumire*). Ube City, Prov. Nagato (Apr, 13, 1958. M. Miyazi)

Distrib. Japan.

The present species has been only known from the type locality, Mt. Yokogura in Tosa Province, up to this date.

58. **Parmulina japonica** Hino et Katumoto, spec. nov.

Stromatibus foliicolis, amphigenis, sparsis vel subgregariis, solitariis, saepe confluentibus, plane disciformibus, 1.2–2mm diam., 100–150μ altis, centro brevissime stipitatis, fuligineis, 15–22 locularibus; contextu membranceo, radiato, atrofusco, ex hyphis 16–24μ longis et 3.5–4.5μ latis composito; loculis radiatim depositis, breviter linearibus, longitudinaliter dehiscentis, 300–500μ longis: ascis cylindraceis, apice tereti rotundatis et paulum crassiparietalibus, breviter stipitatis, octosporis, 58–96×13–20μ; ascosporidiis distichis, oblongis vel oblongo-fusoideis, 1-septatis, ad septum non vel vix constrictis, cum celluris superioribus paulum latioribus, apice rotundatis, ad basim obtusis, primum hyalinis, mox brunneis, glabris, 20–25×7–11μ.

Hab. in foliis vivis *Daphniphylli teijsmanni* Zollinger (*Hime-yuzuriha*). Murotomisaki, Prov. Tosa, Sikoku (Mar. 30, 1959. K. Katumoto-Typus in Herb. Fac. Agr. Univ. Yamaguti.).

The fungus attaches itself to the leaves of the host plant only at the central portion of the stromata. The hypostroma of the fungus is subcuticular and the hyphae penetrates into the intercellular portion of the mesophyll of the leaves.

The five species of the fungi belonging to the genus *Parmulina* have been known from the tropical regions of the world. The fungus in question is easily

distinguishable from *Parmulina exculpta* (Berk.) Theiss. et Syd., *P. dimorphospora* (R. Maire) Theiss. et Syd. or *P. stigmatopteridis* (Ferd. et Wge.) Theiss. et Syd.

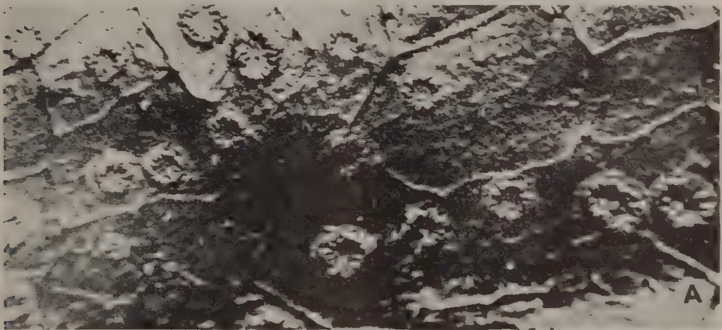




Fig. 2. *Parmulina japonica* Hino et Katumoto. A. stromata. ×8. B. asci and ascospores. ×600.

in respects of the larger stomata and ascospores, and from *P. rehmii* (Maubl.) Theiss. et Syd. or *P. uleana* (P. Henn.) Theiss. et Syd. in respects of the characteristics of the stromata and locules.

59. **Asterostomella meliosmae** Hino et Katumoto, spec. nov.

Maculis epiphyllis, sparsis vel subgregariis, atris, orbicularibus vel irregularibus, 2-5mm diam., frequenter confluentibus; mycelio dense reticulato, undulatis, irregulariter ramosis, ex hyphis fuscis, 18-24μ longis et 5-9μ crassis compositis; hyphopodiis capitatis paucibus, alternis, continuis, ellipsoideis, subglobosis vel oblongis, rectis vel interdum curvatis, apice rotundatis, 12-17×6-10μ; pycnidiis gregariis, dimidiato-scutellatis, convexis, 180-250μ diam.; contextu radiato, centro stellatim dehiscento, margin paulum fimbriato, atro-fusco; pycnosporis obovatis vel obovato-oblongis, continuis, apice rotundatis, ad basim attenuato obtusis, fusco-brunneis, glabris, 20-28×15-19μ.

Hab. in foliis vivis *Meliosmae rigidae* Sieb. et Zucc. (*Yamabiwa*), Hônokawayama, Prov. Tosa (Dec. 25, 1959. K. Katumoto-Typus in Herb. Fac. Agr. Univ. Yamaguti.).

The present fungus seems to the genus *Asterina*, but the ascigerous stage of this fungus was not found in the writer's material.

○ **名古屋中心の外来雑草**（久内清孝）Kiyotaka HISAUCHI: Some casuals found in Nagoya and Yokkaichi, Japan.

名古屋市に住む上田 豊氏からの依頼により同氏が採集された外来雑草をかんさつする機会を得た。そのなかで著しいもののいくつかを次に記録することにした。

タデ科 *Emex spinosa* Campd 名古屋，1960；ナタネ科 *Carrichtera amara* Ascher 名古屋，1960；*Lepidium latifolium* L. 四日市，1960；マメ科 *Sesbania aegyptiace* ツノクサネム，名古屋，ミソハギ科 *Lythrum hyssopifolia* L. コメバミソハギ，名古屋，1960；ゴマノハグサ科 *Antirrhinum orontium* L；キク科 *Calotis cuneifolia* R.Br., *C. scapigera* Hook. 名古屋，1959・60；*Centaurea lanatum* DC 名古屋，1960，*Soliva pterosperma* (Juss.) Less. 名古屋，1960. これらのうち *Calotis* はオーストラリアに特産するもので，名古屋市北区にある日本毛織会社が輸入した羊毛に付着して来た種子を上田氏があつめて播種して発芽させて得られたものだという，*Emex* は水島正美博士がかんていしてわかったものだが1属1種のもので地中海沿岸地方と濠州に産するもの，*Antirrhinum orontium* は欧州原産ではあるが北米では casual weed として古くから記録されているキンギョソウと同属の小草で，今回私が検したものは高さ約 20cm，線状披針形で，長さ 1-4cm の葉をつけ葉腋に花をつけていて，全草に2花しかなく各花は長さ約 1cm で上半部は紅色を呈していた。*Carrichtera annua* Aschers (*Vella annua* L.) も地中海沿岸地域から近東イランを産地とする1属1種の1年生草本で，写真でわかるような姿をして多毛で，果は成熟すると垂下し2節に仕切られ，上半部は扁圧されて種子なく，下部は外部に剛毛が密生し，各室3種子を蔵するという変んなものである。花は黄味のある白。*Soliva* はわが国の南部にあるシマトキンソウの仲間であるが頭状花序は柄がなく，根元にできないで茎の葉腋にできる，米州南部の産であるがニュージーランドからオーストラリアに侵入していることが記録されていた。

さてこれらのものには和名はもちろんないけれども，こんな風来ものには長く存続するものではないのが普通だから既に和名の与えられていたものは別として，いちいち和名をつけるにも及ぶまいし，またつけてもあまり役にもたつまいから和名の製造はやめておくことにした。名古屋や四日市は開港であるため外国の雑草が千客万来のようであって，多く濠州を中継地として来るもののようである，まこと迷惑千万なことである。こんなものをしらべて見ても，物しりにはなれるかも知れないが。それ以上なににもならない。もしこれが，繁殖し土着して田畑の害草ともなれば，それは別であるが，日本では恐らくそんな心配も必要なかろう，熱帯地方は別でしばしば話題になるらしくフィリピンで開かれた第8回太平洋学術会議のときなどではテーマとしてとり上げられたが，日本ではそれほどさわりにもなるまい。この頃のように交通が発達すると必然の結果として次から次えと這入ってくるものをいちいち調べあげたら日もこれ足らずで，まことに骨折損のくたびれもうけで，人から質問されたとき，その名を答えて得意になり植物学者の末席に列しているような錯覚に落入る位がせきの山である。いままで多くの外来雑草が各地から報告されているが，あとまで残っているものは少いようであるからこれ等はとうていわれわれの身近のものにはならないのだから相手にしなくともよいのだが，そこが人間の弱いところで一度見つかった以上，そのままにもできず一応しらべて見る気にもなるが，なかなかのひまつぶしである。標本は上田氏の私蔵するもので公共機関で一般に見ることができない秘蔵品だから写真をかかげておいた。

A recording report of some rare casuals which are indicated in latin names in the above japanese text. Seeds of these plant are probably carried here with Australian wool clip. Majority of these are likely to disappear and will not persist.



Fig. 1. Top: *Emex spinosa* (left). ×1/4. Fruit (right). ×4.5.
Bottom: *Soliva pterosperma*. ca. ×1/3.

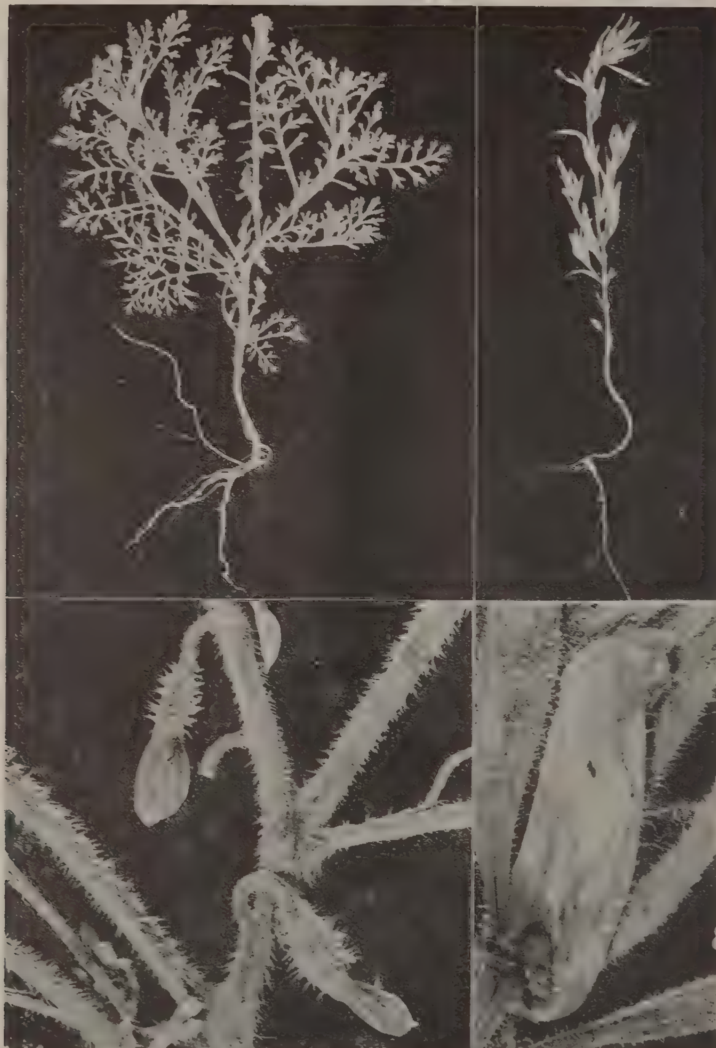


Fig. 2. Top: *Carrichtera amara* (left), ×1/2. *Antirrhinum orontium* (right), ca. ×1/3. Bottom: Fruits of *Carrichtera amara* (left), ca. ×3.5. Flower of *Antirrhinum orontium* (right), ×6.



Fig. 3. Top: *Lythrum hyssopifolia* (left). ×3. *Calotis cuneifolia* (right). ×1/2.
Bottom; *Calotis scapigera*. ×1/2.

○ キタカミヒョウタンボク（原　寛・菊地政雄） Hiroshi HARA & Masao KIKUCHI: A new variety of *Lonicera demissa* Rehder from north Honshu

北上高地からはヤブヒョウタンボク (*Lonicera linderifolia* Maxim.) が知られているが，牧野博士(1906)が同種として引用した八ヶ岳産の標本は後にイボタヒョウタンボク (*L. demissa* Rehder) であることが明かになった。そして後者は本州中部の信濃美ヶ原以南，赤石山脈，八ヶ岳から関東山地西部，富士山などの山地(海抜 1000—2000m)に限って産するものと思われてきた。近年イボタヒョウタンボクもまた北上高地に産することが分り，菊地は「陸中早池峯連峯の植物」(1961) の中でこれが遠島山，姫神山，堺の神山，早池峯山，六角牛山，五葉山，室根山とかなり広く分布する事実を記録した。

しかし北上高地のイボタヒョウタンボクは本州中部産の基準形と比べると少し異っている。葉は大形となり枝先では長さ 8cm 余に達し先端は長鋭尖形にとがり，枝下部の葉では基部が円くなり，葉の形と大さでは反って北海道東部に分布するネムロブシダマを思わせる。花も少し大きく長さ 10-16mm，上唇の裂片も長さ 2-4mm になる。イボタヒョウタンボクの基準形では勢のよい枝先の葉でも長さ 4cm 位で先端は鋭頭，花は長さ 8-13mm，上唇の分かれ方は浅く裂片は長さ 2-3mm である。しかしその他の形質や毛の状態などでは両者はよく一致する。

北上高地のものはイボタヒョウタンボクと同一種と見られるが，上記の差異や著しく離れた分布地域を考えて，その地理的変種と見なすのが妥当と思い，ここにキタカミヒョウタンボクの新和名をあたえて発表する。これらはおそらくネムロブシダマと同一祖先からでて本州の山地に隔離孤立して分化したものと考えることができる。

Lonicera demissa Rehder var. **borealis** Hara et M. Kikuchi, var. nov.

A typo foliis majoribus 3-8.5cm longis 1-3.6cm latis interdum apice longe acuminatis basi rotundatis, floribus majoribus, corollis 10-16mm longis, labio superiore 6-10mm longo lobis 2-4mm longis differt.

Typus. Honshu. Prov. Rikuchu: in monte Himekami (M. Kikuchi, Mai. 31, 1961, fl.) in TI.

The discovery of this variety in the Kitakami plateau suggests that *Lonicera demissa* has differentiated in Honshu from the same progenitor as *L. chrysantha* Turcz.

投稿規定

1. 論文の投稿者は原則として本誌1年以上の購読者であること.
2. 文章は簡潔に書くこと.
3. 論文の脚註には著者の勤務先（勤務されていない場合は住所）とその欧文訳を付記すること.
4. 本論文と雑録の著者名にはローマ字綴り，題名には欧文訳を付けること.
5. 和文原稿は平がな交り，横書のこと．植物和名には片かなを用い，なるべく400字詰の原稿用紙を用いること．欧文原稿は"一行あき"にタイプすること.
6. 和文の本論文には簡単な欧文摘要を付けること.
7. 原図には必ず倍率を表示し，図中の記号，数字には活字を貼込むこと．原図の説明文は2部を作製し，1部はたやすく剝がすことができるように貼っておくこと．図は刷上りで頁幅か又は図の側方に10字以上のあきが必要である.
8. 登載する順序や体裁は編集部にお任かせのこと．活字の指定は編集部でしますが，特に希望される個所があれば鉛筆で記入のこと.
9. 本論文に限り別冊50部を進呈します．それをこえる部数については実費を著者で負担のこと.
   a. 希望される別冊の部数は論文原稿に明記のもの以外は引き受けません.
   b. 雑録の別刷は1頁以上のもので実費を著者が負担する場合に限って作成します.
   c. 著者の負担する別刷の代金は印刷所から直接に請求しますから印刷所へ御送金下さい．御送金の後に別刷を郵送します.
10. 送稿や編集に関係した通信は　東京都文京区本富士町　東京大学薬学部生薬学教室植物分類生薬資源研究会，藤田路一あてのこと.

編　集　員

Members of Editorial Board

朝比奈泰彦 (Yasuhiko ASAHINA)
編集員代表 (Editor in chief)

藤田路一 (Mitiiti FUJITA)	原　寛 (Hiroshi HARA)
久内清孝 (Kiyotaka HISAUCHI)	伊藤　洋 (Hirosi ITO)
木村陽二郎 (Yojiro KIMURA)	木村雄四郎 (Yushiro KIMURA)
小林義雄 (Yosio KOBAYASI)	前川文夫 (Fumio MAEKAWA)
佐々木一郎 (Ichiro SASAKI)	津山　尚 (Takasi TUYAMA)

代 金 払 込

第 **36** 巻 **7** 号から次のように購読料がかわりました。

1) 本誌代価普通号 1 部 **100** 円，増大号は別に定めます。

2) 1 ケ年分（雑誌普通号及増大号を含む 12 回分）**960** 円（送料別）

3) 7 月以後を含む代金払込は改正代価で，東京都目黒区上目黒 8 の 500 津村研究所（振替東京 1680）宛に御送り下さい。郵税は 1 冊 6 円の割で加算願います。

All communications to be addressed to the Editor

Dr. **Yasuhiko Asahina,** Prof. Emeritus, M. J. A.

Pharmaceutical Institute, Faculty of Pharmaceutical Sciences, Univerisity of Tokyo

Hongo, Tokyo, Japan.

昭和 36 年 11 月 15 日印刷
昭和 36 年 11 月 20 日発行

編輯兼発行者　佐々木一郎
東京都大田区大森調布鵜ノ木町231の10

印刷者　小山恵市
東京都新宿区筑土八幡町 8

印刷所　千代田出版印刷株式会社
東京都新宿区筑土八幡町 8
電話 (301) 0471 番 / (331) 8152 番

発行所　植物分類・生薬資源研究会
東京都文京区本富士町
東京大学薬学部生薬学教室

津村研究所
東京都目黒区上目黒 8 の 500
（振替 東京 1680）

定価 100 円

不許複製

昭和二十七年六月十三日　第三種郵便物認可
昭和三十六年十一月十五日印刷　昭和三十六年十一月二十日発行（毎月二十日発行）

「植物研究雑誌」第三十六巻　第十一号　定価一〇〇円